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SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

REPORT

CD NO.

COUNTRY East Germany

DATE DISTR. 11 June 1953

SUBJECT Disposition of Four Schlieren Devices; Planned  
BTB Experiments with Fifth

NO. OF PAGES 1

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PLACE  
ACQUIREDNO. OF ENCLS.  
(LISTED BELOW)DATE OF  
INFO.SUPPLEMENT TO  
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THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE  
OF THE UNITED STATES WITHIN THE MEANING OF TITLE 18, SECTION 793  
AND 794 OF THE U. S. CODE AS AMENDED. IT TRANSMISSION OR REVELATION

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1. Four of the five Schlieren devices which the Berliner Technischer  
Duero of SGO Transmasch received from VLD Carl Zeiss, Jena, are to be  
shipped from LTB to an unknown destination. Orders to crate the  
four were given in mid-March 1953. LTB personnel believe that the  
devices are to go to Russia.
2. Only one Schlieren device is to remain permanently at LTB. Carl  
Ing. Emil Klein and test engineer (Inu) Litter of the experimental  
department (Versuchsabteilung) of LTB are in charge of this device;  
they also guide the research work carried out with it. In March  
1953, a test installation including the remaining Schlieren device was  
completed. A single-cylinder Diesel test motor provided with a whirl  
chamber (Wirbelkammer) will be investigated by means of the Schlieren  
device. The whirl chamber is provided with two homasil-quartz windows allowing  
the study of flow and combustion processes inside the cylinder.
3. Tests to be undertaken soon will cover the following:
  - a. Cold motor: Injection of Diesel fuel without ignition, study of  
flow processes;
  - b. Warm motor: Injection of Diesel fuel without ignition, study of  
flow processes;
  - c. Warm motor: Injection of Diesel fuel with ignition, study of combustion  
processes.
4. The processes under investigation will be recorded with slow motion  
West German ALC cameras (ALC Zeitdehner), with a speed of 80,000 pictures  
per second.

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